

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/IB2005/002266

International filing date (day/month/year)
25.07.2005

Priority date (day/month/year)
05.08.2004

International Patent Classification (IPC) or both national classification and IPC
F04D29/38

Applicant
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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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WRITTEN OPINION OF THE
 INTERNATIONAL SEARCHING AUTHORITY

International application No.
 PCT/IB2005/002266

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-20
	No: Claims	
Inventive step (IS)	Yes: Claims	1-20
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-20
	No: Claims	

2. Citations and explanations

see separate sheet

which the chord length increases gradually from the inner end to the outer end of the blade, "thereby allowing the relatively high rotational speed to be used effectively". This furthermore "enhances the amount of airflow and improves the efficiencies of the fan". In D1 however the blade profile has a non negligible chamber (see fig.3, D1) which results in a appreciable difference between the chord length and the claimed centre line length.

D2 discloses a fan, which, although failing to suggest blades having respectively convex trailing and concave leading edges, but only forward or backward swept blades, it suggest that the chord length should increase with the radius increase (see fig. 2, D2). Further details and chord length ranges and also suggested. The adimensional values of said ranges are anyway much bigger than what claimed in the present application.

Therefore the skilled man would not find any indication to combine the known fans and to modify them with inventive considerations, in order to arrive at the claimed subject-matter.

Therefore the solution to the technical problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT).

4. Claims 2-20 are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
5. The subject-matter of the claims is considered to be industrially applicable (Art. 33(4) PCT).
6. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.